Witness Name: Stuart Mark Baddeley
Statement No.: First

Exhibits: 5
Dated: 23 May 2025

UK COVID-19 INQUIRY

WITNESS STATEMENT OF STUART MARK BADDELEY

I, STUART MARK BADDELEY, Vice President of Protein Cellular and Structural Science, of the GSK group of companies ("**GSK**"), whose ultimate parent company is GSK plc, 79 New Oxford Street, London WC1A 1DG, will say as follows:

Introduction

1. I make this witness statement in response to the request for evidence received in draft on 31 July 2024 by GSK from the UK Covid-19 Public Inquiry (the "**Inquiry**") in relation to Module 7 of the Inquiry ("**Module 7**"). In accordance with the Inquiry's request, the period I focus on in this statement is from 1 January 2020 to 28 June 2022 (the "**Relevant Period**").[1]

2. The contents of this witness statement are true and within my own knowledge, save where I have obtained information from conversations with others or from reading documents, in which case I believe that information to be true.

3. I attach to this statement as Exhibit SB copies of the documents to which I refer below in the format "SB/x – INQ000000".

[1] I understand this covers the period following the confirmation of 27 cases of pneumonia of unknown origin in Wuhan City on 31 December 2019 to the date the Inquiry's Terms of Reference were established.

Structure of the statement

4. The topics I discuss in this statement are:

   (a) my professional experience and roles, including during the Covid-19 pandemic (the "**Pandemic**");

   (b) an overview of GSK's work as relevant to Module 7;

   (c) GSK's involvement in the Cambridge Testing Facility (as defined in paragraph 9 below);

   (d) the robustness and efficacy of the Cambridge Testing Facility;

   (e) the relationship between the Cambridge Testing Facility and the Network (as defined in paragraph 10 below); and

   (f) additional related topics that I understand are of interest to the Inquiry:

      (i) an overview of GSK's interactions with the UK Government regarding the Cambridge Testing Facility;

      (ii) GSK's observations in relation to the testing regime; and

      (iii) lessons learned, as relevant to Module 7.

Experience and roles

5. I joined GSK in 1996 as a research scientist, focusing on preclinical research and progressively taking on more senior roles within the research platform technology groups. I spearheaded efforts to miniaturize and automate screening processes at GSK, eventually heading the Screening and Compound Profiling department in the UK.

6. For the past nine years, I have served as Vice President of Protein Cellular and Structural Science, overseeing the production of biological reagents for all discovery programs and structural biology efforts to aid in discovering new medicines. During this tenure, I have modernised the team and significantly enhanced capabilities in reagent generation and structural biology.

7. My extensive expertise covers assay development, compound profiling, high throughput screening, cellular and protein production, biophysical and structural sciences.

Overview of GSK's work as relevant to Module 7

8. GSK is a global healthcare group, headquartered in the UK. We develop medicines and vaccines with a focus on infectious diseases, HIV, immunology, respiratory and oncology. We have an R&D focus on the science of the immune system, human genetics and advanced technologies, and have extensive capabilities in vaccines and medicines development.

9. During the Relevant Period and in relation to the subject matter covered by Module 7, GSK's involvement in relation to the Pandemic was focused on establishing a testing facility in Cambridge (the "**Cambridge Testing Facility**") in collaboration with AstraZeneca ("**AZ**") and the University of Cambridge ("**UC**").[2]

10. Whilst there was a pre-existing infrastructure of diagnostic laboratory service providers, GSK's understanding is that these existing laboratories had not been established to handle the scale of testing required by the Pandemic. As such, the goal of the Cambridge Testing Facility during the time that GSK was involved in its operation (between April 2020 and August 2020) was to increase testing capacity in the UK for the Covid-19 virus. One activity to achieve this goal was to devise and test technologies for the automation and miniaturisation of testing for the Covid-19 virus, which could then be shared and utilised by the Network of Lighthouse Laboratories (the "**Network**") to increase the capacity and decrease the costs of those testing facilities. GSK did not have any other involvement in the development of the Network.[3]

11. GSK withdrew from its substantive involvement with the Cambridge Testing Facility by the end of August 2020, when the testing process at the Cambridge Testing Facility had become fully established and an alternative workforce had been identified. After this point, GSK's involvement with the Cambridge Testing Facility was limited to

[2] GSK was not involved in the 'trace' or 'isolate' limbs of the matters within the scope of Module 7.

[3] Except that, during the initial lockdown in the UK from late March 2020, GSK donated PCR equipment and reagents to the Network, and made a laboratory facility at GSK's Stevenage site available to various testing centres for approximately four months.

continuing to lend critical equipment[4] to the facility and responding to ad hoc queries raised by the facility until around early 2021. AZ and UC identified a third party, Charles River Laboratories, to enable the transition of the operation of the Cambridge Testing Facility from GSK and AZ staff. Responsibilities were handed over to contract workers, allowing most of GSK's personnel to return to their regular duties at GSK in August 2020.[5]

Overview of GSK's involvement in the Cambridge Testing Facility

12. In light of the UK Government's call for a national effort to boost the UK's testing capacity for the Covid-19 virus, GSK agreed, in April 2020, to collaborate with AZ and UC on a short-term and "pro bono" basis in setting up the Cambridge Testing Facility.

13. In summary, each of AZ's and GSK's complementary R&D expertise in techniques relevant to diagnostic testing was combined along with the provision of personnel and equipment from both GSK and AZ. GSK in particular provided its extensive knowledge of conducting highly automated biological assays,[6] including their development, scaling, and optimisation. GSK also provided its experience in assay reproduction, data management, sample flow management, data analysis and quality control.

14. The establishment of the Cambridge Testing Facility had two primary objectives. The first was to increase the testing capacity of diagnostic polymerase chain reaction ("**PCR**") testing of Covid-19 virus samples within the UK.[7] The second and ultimate goal was to develop and test technologies for the automation and miniaturisation of PCR testing of Covid-19 virus samples capabilities, which could be applied at the Cambridge Testing Facility and then potentially be shared with the Network, thereby creating a more efficient and scalable UK PCR testing capability as a whole.

[4] The critical equipment loaned to the Cambridge Testing Facility by GSK included centrifuges, liquid handlers and microplate readers. Due to global demand for such equipment during the Pandemic, the lead times for new equipment to be supplied by manufacturers were lengthy (for example, new microplate readers to replace those loaned by GSK were not supplied until November 2020) and therefore the Cambridge Testing Facility relied on equipment loaned by GSK.

[5] After this time a small number of GSK personnel continued to work at the Cambridge Testing Facility until suitably-qualified staff could be found to replace them, which I recall took approximately four weeks.

[6] An assay is a laboratory test to find and measure the amount of a specific substance, e.g. a virus.

[7] Covid-19 PCR tests use primers that match a specific segment of the virus's genetic material, enabling the detection of the virus's presence.

The first objective - Increasing the testing capacity within the UK

15. GSK's initial focus was the first objective – to set up functional testing facilities at the Cambridge Testing Facility. There was a rapid mobilisation in April 2020, including to install equipment (with a significant contribution of existing equipment from GSK laboratories, with some equipment newly procured by GSK) and to put in place a laboratory information management system ("**LIMS**") (software that tracks the progress of a sample through the various stages of the testing process).

16. LIMS was a Software as a Service system called Limfinity, which was provided by a third party vendor as a website. This LIMS was already being used by the Network, which had developed/configured LIMS to support the PCR process being used for Covid-19 testing. When the Cambridge Testing Facility was set up, the LIMS vendor created a duplicate environment for the facility. As the GSK team learned the process better and understood the quality challenges, they enhanced the configuration of LIMS (diverging from the Network's LIMS) in order to better align with the process at the Cambridge Testing Facility and to enhance quality and compliance through innovative improvements.[8] GSK also shared these improvements with the Network, to give it an opportunity to also take advantage of the learnings from the Cambridge Testing Facility.

17. LIMS worked by tracking barcodes on samples. Barcodes were on sample tubes sent to the public by the Network. Data recorded in LIMS tracked a sample through the various stages of the testing process (including collection, processing, result recording, reporting, storage, and retrieval of the test results). The final positive or negative result and barcode was then sent back to the Network. It was the Network's responsibility to associate each barcode with the relevant individual and to manage the communication of test results to the individual. Importantly, the Cambridge Testing Facility did not receive any personal data.

18. The Cambridge Testing Facility's LIMS was not integrated with NHS England's IT systems. Data was shared via a staging area, following the same design used by the Network. NHS England created a secure storage location, where data was periodically deposited for them to collect and process. This was a tightly governed process,

[8] LIMS for the Cambridge Testing Facility was developed by a number of IT staff from GSK, including Shane Weaver (Senior Director Research Labs) and Penny Smee (Development Electronic Laboratory Notebook (ELN) Director Product Owner).

managed by a select group of individuals to ensure control over what data was sent, following multiple data quality checks.

19. AZ, GSK, and UC formed a Joint Steering Committee (as discussed below), identified key workstreams that needed to be developed and divided up accountabilities to lead each of these. Each workstream involved all parties.

(a) AZ was responsible for science operations, procurement and external communications. This included the leadership of supervision and management of the day-to-day operations of the Cambridge Testing Facility (including procurement, maintenance, training and preparation of laboratory documentation), and taking overall accountability for the operation and delivery of the testing results.

(b) UC provided site operations and legal support for the Cambridge Testing Facility, built the IT infrastructure and managed the site operations, catering, security, safety, housekeeping, and external liaisons.

(c) GSK was responsible for human resources, information technology solutions and sustainability, including:

(i) developing, configuring and deploying the IT applications within the Cambridge Testing Facility such as configuring the LIMS software to support generation of test results and accurate sample tracking in the testing facility;

(ii) developing, implementing, and maintaining the quality procedures for scientific operation and quality indicators to evaluate the Cambridge Testing Facility's performance for the whole testing process, and reporting their effectiveness to the site leader of the Cambridge Testing Facility;

(iii) developing and optimising processes to increase capacity, testing robustness and efficiency of the testing methodology by ensuring the accuracy, integrity, and reliability of data collected at the Cambridge Testing Facility;

(iv) developing the human resources approach to identify and recruit suitably trained GSK, AZ and UC staff to operate the Cambridge Testing

Facility, including defining the overall staffing approach and terms and conditions for personnel seconded to the facility and identifying suitable staff to operate the facility based on the role details provided; and

(v) other HR-related tasks including providing training to staff (such as on-site induction and safety inductions), risk control measures, workflow procedures, IT systems, managing shift patterns or workforce logistics during periods of high demand, and making occupational health arrangements.

20. Each area of responsibility was assigned an owner to deliver the required capability. The leads of each workstream attended a daily meeting with the site lead to review, prioritise, align and action.

21. All three parties shared in deploying a highly skilled workforce at very short notice to operate the Cambridge Testing Facility. This workforce included existing employees from GSK and AZ and, in the case of UC, also included post-graduate students and post-doctoral researchers.

22. There were various committees and working groups established within the Cambridge Testing Facility to facilitate its effective operation. These groups included:

(a) the Joint Steering Committee, which provided oversight of the Cambridge Testing Facility's operations as well as a forum for resolving any issues and disputes in relation to the Cambridge Testing Facility. Each of AZ, GSK, and UC appointed two members to the Joint Steering Committee. Dr Becky Scott (now Vice President, Head of Vaccines R&D Strategic Business Operations, Vaccines R&D/Infectious Diseases, but then Operations Director, Medicinal Science and Technology) and I represented GSK in the Joint Steering Committee, and we met with representatives from AZ and UC at least twice per week during the period that GSK was involved in the operation of the facility to decide on key matters such as the technical and operational steps necessary to establish and operate the Cambridge Testing Facility, the formation of the Joint Management Committee and Sustainability Committee (each as discussed below), changes to the budget or decisions to incur expenditures beyond what was originally planned;

(b) the Joint Management Committee was accountable for the day-to-day operation of the Cambridge Testing Facility and the day-to-day supervision of the operations teams carrying out the Covid-19 virus testing and all personnel engaged at the Cambridge Testing Facility. The Joint Management Committee consisted of over 20 individuals, including the following roles taken by GSK:

(i) the Project Management Operations Support (responsible for project management, record keeping, and issue tracking);

(ii) the Scientific Operations Lead (responsible for scientific operations, training, and capability development);

(iii) Operations Teams (responsible for daily tasks related to sample processing and testing);

(iv) Compliance and Quality Assurance (responsible for compliance and quality assurance);

(v) the Quality Manager (responsible for the implementation and maintenance of the QMS, as discussed below);

(vi) the Data Analysis / LIMS team (responsible for maintaining IT applications);

(vii) the Data Lead (responsible for data quality and assurance); and

(viii) the Human Resources team (responsible for creating and implementing people policies); and

(c) the Centre Sustainability Committee focused on creating and implementing a sustainability plan to ensure the continued delivery of Covid-19 testing services after 31 July 2020.

23. Each of these committees was overseen by more senior staff members from each of AZ, GSK, and UC.

The second objective – automating the testing

24. Whilst PCR testing was not a new testing technology and was routinely carried out by the NHS in small hospital labs, conducting PCR tests at the scale needed in the context of a pandemic was a new challenge which required optimisation of this technology.

25. The second objective of the Cambridge Testing Facility was therefore to develop processes and technologies for the automation and miniaturisation of PCR testing, with the aim of increasing productivity at the Cambridge Testing Facility and potentially sharing the output of that work with the Network so that PCR testing capacity could be increased across the Network. These improvements were focussed on testing efficiency, cost effectiveness, automation and addressing issues with supplies of materials and consumables.

26. GSK and AZ brought their considerable scientific and technical expertise in robotics and automation in a laboratory setting to this endeavour. The Cambridge Testing Facility was able to significantly increase its throughput of PCR tests as a result of these efforts, ultimately processing over 15,000 tests per day. The approaches adopted at the Cambridge Testing Facility were openly shared with the Network in regular meetings.

Key decision-makers from GSK at the Cambridge Testing Facility

27. During GSK's collaboration with AZ and UC to establish the Cambridge Testing Facility, the key individuals from GSK included myself, Mr George Pickering (Vice President and Associate General Counsel), Dr Scott, Dr Jon Bartlett (Global Director, Laboratory Quality Assurance and Data Integrity Quality Assurance), and Dr Tony Wood (now Chief Scientific Officer of GSK, but then Senior Vice-President, Medicinal Science and Technology). Dr Wood was the overall decision maker.

28. Initially, Dr Wood was the primary external lead with the UK Government for GSK's Covid-19 response team concerning the matters covered by Module 7. In response to the UK Government's request for pandemic solutions, Dr Wood discussed with AZ ways in which GSK and AZ could work together to contribute to the national effort to combat the Pandemic. Dr Wood was involved in the early stages of the project to set up and resource the Cambridge Testing Facility with personnel and equipment.

29. Mr Pickering was involved in negotiating the relevant agreements and advising on various questions that arose during the implementation of the arrangements.

30. Once GSK's scope of work relating to the Cambridge Testing Facility was more clearly defined, Dr Wood gradually transitioned out of the day-to-day management responsibilities. Dr Scott and I then assumed day-to-day oversight of GSK's contribution to the operation of the Cambridge Testing Facility until GSK withdrew, as planned, in August 2020. Dr Bartlett was responsible for quality assurance and compliance at the Cambridge Testing Facility, including the development of policies to ensure that the testing service at the Facility met the required standards.

Robustness and efficacy of the Cambridge Testing Facility

31. In a non-Pandemic situation, GSK requires its diagnostic laboratories, and those of its third-party partners, to obtain accreditation in line with the standards set out in ISO standards such as 17025 or 15189.[9] ISO 15189 is considered to be the gold standard for quality and competence in these laboratories. However, the process of achieving an ISO accreditation is lengthy; typically taking at least six months. As such, given the short timeframe within which the Cambridge Testing Facility had to be set up and the strong impetus from the UK Government to ensure that the Cambridge Testing Facility would start testing as soon as possible, it was not practicable for the Cambridge Testing Facility to obtain a formal ISO accreditation prior to commencing testing.

32. Nevertheless, ensuring the accuracy of testing was a key priority for the Cambridge Testing Facility and processes were put in place to ensure that the quality and competence in the Cambridge Testing Facility was scientifically rigorous. In particular, in collaboration with AZ, GSK developed a quality management system ("**QMS**"), which consisted of a framework of policies, processes and procedures which was intended to be used by all staff at the Cambridge Testing Facility to ensure the delivery of reliable and accurate results, adhering to the principles of ISO 15189. The QMS was also designed to comply with the following guidance that was published in draft by the Department of Health and Social Care ("**DHSC**"):

    (a) draft guidance entitled "*DRAFT SARS-CoV-2 (COVID19) – Guidance for the implementation of national testing laboratories*", which set out guidance on

[9] ISO standards are published by the International Organisation for Standardisation, a non-governmental international organisation that designs and publishes standards covering almost all aspects of technology, management and manufacturing.

implementation processes for laboratories that were designated to provide additional testing capacity for the Covid-19 virus (SB/1 – INQ000587642);

(b) draft guidance entitled "*DRAFT Guidance for the field laboratories on interpreting SARS CoV 2 RNA (COVID-19) test results and reporting*", which set out guidance on interpretation and reporting of results for testing for the Covid-19 virus (SB/2 – INQ000587643); and

(c) draft guidance entitled "*DRAFT SARS-CoV-2 (COVID19) national testing laboratory quality assurance requirements*", which set out quality assurance guidance for laboratories that were designated to provide additional testing capacity for the Covid-19 virus (SB/3 – INQ000587644).

33. As part of the QMS, a series of detailed standard operating procedures ("**SOPs**") designed to guide the staff at the Cambridge Testing Facility through key tasks and processes. They set out the best practice to perform specific activities, such as the testing processes, safety, sample handling, and operation at the Cambridge Testing Facility, ensuring the tasks were completed in a consistent, safe, and efficient manner. As at 26 April 2020 the SOPs in place were:[10]

(a) SOP CB 01: Station 0: Oropharyngeal and nasopharyngeal swab sample receipt;

(b) SOP CB 02: Station 1: Oropharyngeal and nasopharyngeal swab sample manual preparation and viral deactivation prior to RNA extraction;

(c) SOP CB 03: Station 2: RNA extraction from nasopharyngeal and oropharyngeal swabs using the Biomek I5;

(d) SOP CB 04: Station 3: Reconstitution and storage of RT-PCR reagents;

(e) SOP CB 05: Station 3: Preparation of 384-well PCR plate and addition of negative control;

(f) SOP CB 06: Station 3&4: Preparation and addition of positive control to PCR plate;

[10] The SOPs were stored on a Microsoft Teams site maintained by AZ to which GSK no longer has access.

(g) SOP CB 07: Station 3: Addition of RNA template to 384-well RT-QPCR master mix plate;

(h) SOP CB 08: Station 4: RT-QPCR running and data analysis;

(i) SOP CB 09: Station 0 & 1: Spill procedure;

(j) SOP CB 10: Station 0 & 1: Recording of no test and sample void due to sample loss;

(k) SOP CB 11: Recording of no test due to sample loss in process (failure);

(l) SOP CB 12: General working practices in the Cambridge National Testing Centre;

(m) SOP CB 16: Process validation;

(n) SOP CB 17: Station 5A: Authorisation of PCR data;

(o) SOP CB 18: Station 5B: Reporting of test results to NPEx; and

(p) SOP CB 20: Equipment calibration and storage monitoring.

34. Also, prior to carrying out tests on swabs from patients provided by DHSC, the Cambridge Testing Facility participated in interlaboratory comparison activities (formally called 'concordance testing') as part of its quality assessment on its testing processes. Duplicate samples were provided to the Cambridge Testing Facility by other Covid-19 virus testing laboratories (including the laboratory at Addenbrooke's Hospital in Cambridge) and the results obtained on those samples by the Cambridge Testing Facility were compared with those obtained by the providing laboratory to ensure that the Cambridge Testing Facility was achieving results that were in line with those from existing testing facilities.

35. Before approval was given by the NHS for the Cambridge Testing Facility to begin testing samples from patients (other than duplicate samples tested as part of the set-up of the laboratory), and to feed such results into the National Pathology Exchange for Covid-19 testing results, representatives from the NHS visited the Cambridge Testing Facility on 27 April 2020 to evaluate the testing methodology and assess its quality programme and SOPs. This evaluation included conducting the Covid-19 PCR tests in the presence of the NHS representatives, demonstrating the procedures to

clean equipment at the end of a shift, and confirming that the resulting data values fell within the expected ranges. Following that review visit, and the implementation of certain recommended actions for optimisation of the operation of the facility, the NHS approved the Cambridge Testing Facility's operations and confirmed that no further licence or accreditation was required, in order for the Cambridge Testing Facility to commence testing.

36. This approval gave GSK confidence that the Cambridge Testing Facility adhered to the UK Government's expected standards. Following this approval, the Cambridge Testing Facility received sample swabs taken at a number of testing centres under arrangements put in place by DHSC. The swabs were then processed at the Cambridge Testing Facility, results data were generated, and the Cambridge Testing Facility would report the results to the National Pathology Exchange.[11]

37. As far as GSK is aware, no material concerns have been raised in relation to the quality of the testing at, or the operation of, the Cambridge Testing Facility during the period of GSK's involvement. DHSC's intervention in the Cambridge Testing Facility's activities was minimal, but had there been any material concerns these would have been escalated to the ministerial level. Some non-material issues did arise during the initial stages of operation of the Cambridge Testing Facility, which I understand were all recorded and communicated to the NHS. GSK no longer has access to the records of these minor operational issues.

Relationship between the Cambridge Testing Facility and the Lighthouse Laboratory Network

38. The Network comprised diagnostic laboratories established to conduct mass PCR testing during the Pandemic, which was founded by Medicines Discovery Catapult. I have seen a number of public statements from various sources[12] regarding the Network that suggest or imply that GSK or the Cambridge Testing Facility was part of a partnership that developed and/or managed the Network. It is worth clarifying that the Cambridge Testing Facility was established after the Network had already started

[11] The Cambridge Testing Facility did not provide any direct patient-facing services, nor did it collect samples from patients. The delivery of testing samples to the Cambridge Testing Facility and the communication of results to patients were outside of its operational scope.

[12] For example, the homepage of "UK Lighthouse Labs Network" (SB/4 – INQ000587640); and an article dated 13 May 2020 from Alderley Park on "Lighthouse Labs: shining a spotlight on the name" (SB/5 – INQ000587641).

operating and operated under a separate framework, set of governance procedures, and agreements from those governing the Network. GSK and the Cambridge Testing Facility did not have any decision-making authority in relation to the strategy of the Network and the Network had no control over how the Cambridge Testing Facility was managed.

39. Although it operated under different agreements and frameworks to the pre-existing laboratories in the Network, the Cambridge Testing Facility reported into the same governmental structure as other members of the Network and the Network was a valuable partner to the Cambridge Testing Facility. The Cambridge Testing Facility and the Network exchanged know-how and best practices on an informal, ad hoc basis, for mutual benefit.

40. For example, when GSK initially expressed interest in supporting the UK Government's effort to combat the Pandemic, a series of formally structured meetings were arranged for GSK, AZ and individuals involved with the Network to exchange ideas, including discussions about the challenges the Network was facing.

41. I understand from discussions with colleagues that it was evident to GSK from these discussions, that the Network had demonstrated sufficient competency in its operations and governance, including scheduling shifts, staffing, logistics, and IT infrastructure. Consequently, rather than exploring solutions to enhance the productivity of these operations, GSK determined that its most effective contribution would be to share its know-how and best practice to drive process efficiencies. This included identifying opportunities for automating the highly people-dependent processes used by the Network, and developing new methodologies that could create process efficiencies such as the use of miniaturisation to result in the utilisation of smaller amounts of test reagents. It was intended that the automation developed at the Cambridge Testing Facility would facilitate the scaling of PCR testing and serve as a model for the Network to replicate, as discussed at paragraphs 25 and 26 above.

42. I understand that the Cambridge Testing Facility and GSK then continued to exchange know-how, best practices and expertise with the Network on an ad hoc basis. Given the Network's extensive experience in providing PCR tests, it was sensible for GSK and the Cambridge Testing Facility to stay updated on the problems faced by the Network, as the Cambridge Testing Facility would likely encounter similar issues. Existing expertise could also be shared on an informal, ad hoc basis with individual

laboratories that were within the Network. For example, the Lighthouse laboratory in Milton Keynes reached out to GSK for assistance with several technical issues such as limitations in kit delivery and servicing of equipment such as light cyclers. In addition, members of the GSK team visited laboratories of the Network, such as Milton Keynes, to observe workflows.

Additional related topics

Overview of GSK's interactions with the UK Government

43. I understand that, in or before March 2020, GSK was invited to participate in a senior government virtual meeting at the ministerial level, alongside various UK-based organisations that could potentially contribute to addressing the need for testing for the Covid-19 virus.[13] My understanding of that call comes from Dr Wood, as I was not present. This call included tens of participants, among them Matt Hancock (at the time, the Secretary of State for Health and Social Care). Dr Wood represented GSK in this call as he was the primary external lead for GSK's Covid-19 response team.

44. During the call, there was a discussion about establishing appropriate testing facilities for the Covid-19 virus. Immediately following the call, Dr Wood had a discussion with Sir Mene Pangalos of AZ about a collaboration on automated testing. It was considered sensible for GSK and AZ to combine their capabilities, including due to the fact that their operations were located close to one another.

45. The idea of GSK contributing by providing automation expertise was further reinforced following the formal meetings with the Network (as discussed at paragraphs 41 and 42 above). Following further discussions, AZ assumed the leading role in negotiating the relevant agreements with the UK Government for setting up the Cambridge Testing Facility. It was agreed that under the arrangement with the UK Government, DHSC would hold overall responsibility for the strategy and direction of the Cambridge Testing Facility. It was also agreed that GSK would contribute to the project by providing skilled staff and equipment at zero cost to the UK Government (only seeking reimbursement for certain consumable materials such as testing kits and reagents that would ultimately be used at scale).

[13] As stated above, GSK was not involved in tracing or isolation.

46. Throughout GSK's involvement in the operation of the Cambridge Testing Facility, from GSK's point of view, the process of engaging with the UK Government in relation to the project was managed effectively. A small number of officials served as GSK's single point of contact with the UK Government, essentially serving as programme managers from the Government side. This allowed GSK and AZ to focus entirely on addressing the technical challenges associated with the Cambridge Testing Facility,[14] without having to spend time trying to navigate interactions with the various different Government stakeholders.

Testing targets

47. When GSK first embarked on the journey of setting up the Cambridge Testing Facility in collaboration with AZ and UC, the initial focus was to establish the Cambridge Testing Facility's operations. Testing targets were used as a goal when establishing the Cambridge Testing Facility capabilities, but were not finalised until the Cambridge Testing Facility was operational and an understanding of the capability and capacity of the Cambridge Testing Facility was more developed.

48. Once the Cambridge Testing Facility had completed the concordance testing of samples, GSK, AZ, and the UK Government discussed setting expectations for testing targets with real samples. Testing targets were then set at the ministerial level, which were scaled over time, from 10,000 PCR tests per day, increasing to 20,000 and reaching 30,000 by mid-May 2020.

49. From GSK's point of view, it recognised the need for stretching targets, although they still needed to remain achievable. It was not GSK's role to gauge what the necessary screening volume was to effectively control the Pandemic's spread over any period of time, and GSK was therefore not privy to information in order to make any such assessment. If the targets had been wholly unreasonable (for example in light of the potential capacity of the Cambridge Testing Facility) GSK would have raised this with the Government and I am not aware of any such discussions. I believe the testing targets set were considered feasible for the Cambridge Testing Facility at the time they were set, although there was recognition that they were intended to be stretching in order to drive focus and pace.

[14] For example, the technical challenges referred to in paragraph 37.

50. The Cambridge Testing Facility communicated to the NHS, on a daily basis, its capacity for the following day, so that it would not receive more samples than it had capacity to test, in order to avoid the creation of a backlog. Ultimately, there were practical restrictions flowing from the physical size of the Cambridge Testing Facility that meant that a throughput of more than 20,000 tests a day was not thought possible. There were also periods of time during GSK's involvement in the operation of the facility when the facility's capacity, as communicated to NHS the previous day, was not utilised in full as the number of samples delivered to the facility was lower than it had capacity to process.[15]

Lessons learned

51. Overall, I believe GSK's partnership with AZ and UC was successful in enabling such large-scale testing to be undertaken at the Cambridge Testing Facility so quickly following the onset of the Pandemic. With the benefit of hindsight, the Cambridge Testing Facility's achievements in significantly boosting the UK's testing capabilities might now seem like a straightforward task.

52. However, it is important to remember that there was initially a significant lack of understanding of the virus and the disease it caused, which meant that it was unknown what sort of tests would be effective and scalable. Despite these uncertainties, work progressed from the initial conversation between GSK and AZ to testing of samples commencing at the Cambridge Testing Facility in approximately five weeks. Finding a suitable laboratory space, setting up the laboratory with equipment and other preparations were completed rapidly and everyone at the Cambridge Testing Facility was proud of how quickly it was set up and became operational. The partnership between UC, AZ, and GSK demonstrated that effective pooling of expertise and

[15] For example, in the period 17-23 May 2020 the Cambridge Testing Facility had capacity to process an average of approximately 6,600 samples a day and received an average of approximately 4,900 samples a day.

resources from the private sector can contribute significantly to the ability of the Government to respond rapidly to public need.

Statement of Truth

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

Signed: Personal Data

Dated: 23rd MAY 2025